

said microchip including a non-volatile memory component,
said microchip including a DSP, and
said microchip including a component which provides a power management
function of said personal computer; and
a wireless network connection mechanism configured to connect said personal
computer to said network,
said network including an Internet, and
said wireless network connection mechanism being configured to process a
wireless signal that is wave division multiplexed (WDM).

131. (New) The personal computer of claim 130, wherein said wireless network
connection mechanism is substantially located on said microchip.

132. (New) The personal computer of claim 130, wherein said network includes a
World Wide Web.

133. (New) The personal computer of claim 130, wherein substantially all of said
personal computer is located on said microchip.

134. The personal computer of claim 130, wherein said second personal computer is
idled by a personal user.

135. (New) The personal computer of claim 130, wherein said shared operation
includes the provision and use of shared services by at least said personal computer and said
second computer,

wherein a respective portion of said shared operation is allocated between at least said personal computer and said second computer by an allocation mechanism.

136. (New) The personal computer of claim 135, wherein said shared services involve compensation.

137. (New) The personal computer of claim 136, wherein said compensation is financial.

138. (New) The personal computer of claim 135, wherein said shared services include shared file resources.

139. (New) The personal computer of claim 135, wherein said shared services include parallel processing.

140. (New) The personal computer of claim 135, wherein said shared services include multi-tasking.

141. (New) The personal computer of claim 135, wherein said shared services include distributed processing.

142. (New) The personal computer of claim 130, wherein a random access memory (RAM) located on said microchip comprises a non-cache memory.

143. (New) The personal computer of claim 130, wherein said network includes an Internet Service Provider.

144. (New) The personal computer of claim 130, wherein said wireless signal is dense wave division multiplexed (DWDM).

145. (New) The personal computer of claim 130, wherein said network includes a network server computer.

146. (New) The personal computer of claim 130, wherein said network includes an Intranet.

147. (New) The personal computer of claim 130, wherein said microchip includes a firewall.

148. (New) The personal computer of claim 147, wherein said microchip includes a firewall configured to protect a single microprocessor.

149. (New) The personal computer of claim 148, wherein said microprocessor firewall denies all access to said microprocessor by said network.

150. (New) The personal computer of claim 130, wherein said personal computer is intended for personal use by at least one of an individual owner and a leaser of said personal computer.

151. (New) The personal computer of claim 130, wherein said personal computer includes a connection from said personal computer to said network, said connection having a speed of data transmission that is greater than a peak data processing speed of said personal computer.

152. (New) The personal computer of claim 130, wherein said personal computer is controlled by a user of said personal computer through a wireless controller operated by said user.

153. (New) The personal computer of claim 130, wherein said network includes a network server computer.

154. (New) The personal computer of claim 130, wherein said microchip substantially provides a graphics function of said personal computer.

155. (New) The personal computer of claim 130, wherein said microchip includes a modem component of said personal computer.

156. (New) The personal computer of claim 130, wherein said microchip substantially provides a sound function of said personal computer.

157. (New) The personal computer of claim 130, wherein said microchip includes a component which substantially provides a video function of said personal computer.

158. (New) The personal computer of claim 130, wherein said microchip includes a magnetic memory component of said personal computer.

159. (New) The personal computer of claim 130, wherein said microchip includes a BIOS (basic input/output system) component of said personal computer.

160. (New) The personal computer of claim 159, wherein said BIOS is located on a flash memory component of said personal computer.

161. (New) The personal computer of claim 130, wherein said microchip includes a system bus of said personal computer.

162. (New) The personal computer of claim 130, wherein said microchip includes a transponder.

163. (New) The personal computer of claim 130, wherein said personal computer includes one of a handheld personal digital assistant, a wearable computer, an entertainment device, a video game, a videocam, an optical data recording device, a radio, a camera, a household electronic device, and a business electronic device.

164. (New) The personal computer of claim 163, wherein said entertainment device includes one of a television and a digital set-top control box.

165. (New) The personal computer of claim 163, wherein said optical data recording device includes one of a compact disc (CD) and a digital video disk (DVD) player/recorder.

166. (New) The personal computer of claim 130, wherein said personal computer includes one of a digital computer, an analog computer, and a neural computer.

167. (New) The personal computer of claim 130, wherein a system bus of said personal computer includes a hierarchical connection architecture between at least some of said microprocessors.

168. (New) The personal computer of claim 167, wherein said system bus includes a binary tree network architecture between at least some of said microprocessors.

169. (New) The personal computer of claim 167, wherein said network includes a hierarchical connection architecture between at least some of a plurality of personal computers in said network.

170. (New) The personal computer of claim 169, wherein said network defaults to a binary tree network architecture.

171. (New) The personal computer of claim 130, wherein said personal computer includes a direct optical fiber connection to said microchip.

172. (New) The personal computer of claim 130, wherein at least some of said microprocessors have a non-superscalar architecture.

173. (New) The personal computer of claim 130, wherein said microchip is connected to a hard disk drive controlled by said microchip.

174. (New) The personal computer of claim 130, wherein said microchip includes an electromechanical component.

175. (New) The personal computer of claim 130, wherein said microchip includes active configuration of an integrated circuit of said microchip.

176. (New) The personal computer of claim 175, wherein said microchip includes a field-programmable gate array.

177. (New) The personal computer of claim 130, wherein said network includes a network architecture to connect a plurality of personal computers, said network architecture being dynamically configured by said personal computers based at least in part on one of a processing requirement of a shared operation performed in said network and a data requirement associated with said shared operation.

178. (New) The personal computer of claim 130, wherein said microchip includes a component which substantially provides an encryption function of said personal computer.

179. (New) The personal computer of claim 130, wherein said personal computer includes an encryption microchip.

180. (New) The personal computer of claim 130, wherein said personal computer includes a telephone.

181. (New) The personal computer of claim 180, wherein said second computer is a personal computer.

182. (New) The personal computer of claim 130, wherein said non-volatile memory component includes a flash memory component.

183. (New) The personal computer of claim 182, wherein said personal computer is substantially contained on said microchip, said microchip comprising a system on a chip.

184. (New) The personal computer of claim 130, wherein said microchip includes more than one said microprocessor, exclusive of said DSP.

185. (New) The personal computer of claim 184, wherein at least two of said microprocessors are used for parallel processing.

186. (New) The personal computer of claim 130, wherein said personal communications device includes a pager.

187. (New) The personal computer of claim 130, wherein said personal computer is mobile.

188. (New) The personal computer of claim 130, wherein an operating system of said personal computer is Linux.

189. (New) The personal computer of claim 130, wherein said wireless network connection mechanism is configured to make a direct wireless connection to said second personal computer, said direct wireless connection being made without a network server or router.

190. (New) The personal computer of claim 130, wherein said personal computer is configured for a substantially continuous wireless network connection.

191. (New) The personal computer of claim 130, wherein said personal computer includes an optical fiber network connection mechanism configured to connect said personal computer to said network and to process a fiber optic signal that is wave division multiplexed.

192. (New) The personal computer of claim 130, wherein said optical fiber network connection mechanism is configured to process a fiber optic signal that is wave division multiplexed.

193. (New) The personal computer of claim 130, wherein said personal computer includes a network computer.

194. (New) The personal computer of claim 130, wherein said personal computer includes one of an automobile, a transportation device, and a robot.

195. (New) The personal computer of claim 130, wherein said microchip includes an application-specific integrated circuit (ASIC).

196. (New) The personal computer of claim 130, wherein said microchip includes a firewall configured to protect at least a portion of said non-volatile memory component.

197. (New) The personal computer of claim 130, wherein said personal computer and said second computer both have a substantially homogeneous PC architecture.

198. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:

a microchip,

said microchip including a microprocessor, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including a wireless network connection mechanism configured to connect said personal computer to said network,

said network including an Internet,

said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM), and

said microchip including a component which provides a power management function of said personal computer.

199. (New) The personal computer of claim 198, wherein said personal computer includes a telephone.

200. (New) The personal computer of claim 198, wherein said wireless network connection mechanism is substantially located on said microchip.

201. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:
a microchip,

said microchip including a plurality of microprocessors, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including an analog communications component, and

said microchip including a component which provides a power management function of said personal computer; and

a wireless network connection mechanism configured to connect said personal computer to said network,

said network including an Internet, and

said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

202. (New) The personal computer of claim 201, wherein said personal computer includes a telephone.

203. (New) The personal computer of claim 201, wherein said wireless network connection mechanism is substantially located on said microchip.

204. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:

- a microchip,
 - said microchip including a microprocessor, exclusive of a digital signal processor (DSP),
 - said microchip including a flash memory component,
 - said microchip including a DSP, and
 - said microchip including a component which provides a power management function of said personal computer; and
- a wireless network connection mechanism configured to connect said personal computer to said network,
 - said network including an Internet, and
 - said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

205. (New) The personal computer of claim 204, wherein said personal computer includes a telephone.

206. (New) The personal computer of claim 204, wherein said wireless network connection mechanism is substantially located on said microchip.

207. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:

- a microchip,

said microchip including a microprocessor, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including active configuration of an integrated circuit of said microchip, and

said microchip including a component which provides a power management function of said personal computer; and

a wireless network connection mechanism configured to connect said personal computer to said network,

said network including an Internet, and

said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

208. (New) The personal computer of claim 207, wherein said personal computer includes a telephone.

209. (New) The personal computer of claim 207, wherein said wireless network connection mechanism is substantially located on said microchip.

210. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:

a microchip,

said microchip including a microprocessor, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including a field-programmable gate array (FPGA), and
said microchip including a component which provides a power management
function of said personal computer; and
a wireless network connection mechanism configured to connect said personal
computer to said network,
said network including an Internet, and
said wireless network connection mechanism being configured to process a
wireless signal that is wave division multiplexed (WDM).

211. (New) The personal computer of claim 210, wherein said personal computer
includes a telephone.

212. (New) The personal computer of claim 210, wherein said wireless network
connection mechanism is substantially located on said microchip.

213. (New) A personal computer configured to operate as a mobile wireless personal
communications device in a network including computers, the personal computer comprising:
a microchip,

said microchip including a microprocessor, exclusive of a digital signal
processor (DSP),
said microchip including a non-volatile memory component, and
said microchip including a component which provides a power management
function of said personal computer; and
a wireless network connection mechanism configured to connect said personal
computer to said network,

said network including an Internet,
said wireless network connection mechanism including a capability to make a wireless connection to said second personal computer through at least one wireless link,
said wireless connection being made without a network server or router, and
said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

214. (New) The personal computer of claim 213, wherein said personal computer includes a telephone.

215. (New) The personal computer of claim 213, wherein said wireless network connection mechanism makes said wireless connection to said second personal computer through only one wireless link.

216. (New) The personal computer of claim 213, wherein said wireless network connection mechanism includes a capability to make a wireless connection to a third personal computer through only one wireless link, such that said third personal computer has a wireless connection to said second personal computer through said personal computer.

217. (New) The personal computer of claim 213, wherein said wireless network connection mechanism is substantially located on said microchip.

218. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:

a microchip,
said microchip including a plurality of microprocessors, exclusive of a digital signal processor (DSP),
said microchip including a non-volatile memory component, and
said microchip including a component which provides a power management function of said personal computer; and
a wireless network connection mechanism configured to connect said personal computer to said network,
said network including an Internet, and
said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

219. (New) The personal computer of claim 218, wherein said personal computer includes a telephone.

220. (New) The personal computer of claim 218, wherein said wireless network connection mechanism is substantially located on said microchip.

221. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:
a microchip,
said microchip including a microprocessor, exclusive of a digital signal processor (DSP),
said microchip including a non-volatile memory component,
said microchip including a DSP, and

said microchip including a component which provides a power management function of said personal computer; and
a wireless network connection mechanism configured to connect said personal computer to said network,
said network including an Internet and a World Wide Web.

222. (New) The personal computer of claim 221, wherein said personal computer includes a telephone.

223. (New) The personal computer of claim 221, wherein said wireless network connection mechanism is substantially located on said microchip.

224. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:
a microchip,

said microchip including a microprocessor, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including a DSP, and

said microchip including a component which provides a power management function of said personal computer; and
a wireless network connection mechanism configured to connect said personal computer to said network,

said network including an Internet, and

said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

225. (New) The personal computer of claim 224, wherein said personal computer includes a telephone.

226. (New) The personal computer of claim 224, wherein said wireless network connection mechanism is substantially located on said microchip.

227. (New) A personal computer configured to operate as a mobile wireless personal communications device in a network including computers, the personal computer comprising:
a microchip,

said microchip including a microprocessor, exclusive of a digital signal processor (DSP),

said microchip including a non-volatile memory component,

said microchip including an application-specific integrated circuit (ASIC), and

said microchip including a component which provides a power management function of said personal computer; and

a wireless network connection mechanism configured to connect said personal computer to said network,

said network including an Internet, and

said wireless network connection mechanism being configured to process a wireless signal that is wave division multiplexed (WDM).

228. (New) The personal computer of claim 227, wherein said personal computer includes a telephone.

229. (New) The personal computer of claim 227, wherein said wireless network connection mechanism is substantially located on said microchip.